

Wind Powering America

Clean Energy for the 21st Century

Since earliest recorded history, wind power has been used to move ships, grind grain, and pump water. Today, wind power is also being used to provide electricity to homes, schools, businesses, and entire communities. Wind power was the fastest growing source of electricity generation in the world in the 1990s. More than half the United States have wind resources that could support the development of utility-scale wind power plants and most states have enough wind resource to support small turbines. In New Jersey, selected areas in the coastal and northern regions have wind resources that show potential for large-scale electricity generation, and much of the state has enough wind resource to support small wind systems.

Results from a study conducted by the Liberty Science Center (LSC) in Jersey City, New Jersey, from October 1998 through September 1999 show that the Center's site may have enough wind resource to support a small wind turbine. Partnering with AWS Scientific, Inc., LSC, plans to install a small wind turbine (10 kilowatt) as both an exhibit and source of electricity that will generate an estimated 8400 kilowatt-hours annually. The project will be funded by the U.S. Department of Energy's Wind Turbine Verification Program.

The National Park Service and the U.S. Department of Energy (DOE) are also investigating the feasibility of using a small wind generation system in Sandy Hook, New Jersey, at the Gateway National Recreation Area. For more information, contact DOE's Philadelphia Regional Office listed under Additional Resources.

And the Casino Reinvestment Development Authority (CRDA) is going to use a small wind system to power street lighting in a housing development in Atlantic City, New Jersey. CRDA hopes to install the wind system, which will consist of a few small wind turbines, by late 2001 or early 2002. CRDA's Cityscape Development will also feature sustainable design and energy efficiency and renewable energy technologies to reduce the homeowner's electric bills

and environmental impact. For more information, contact: Leslie MacDonnell at lamac@dandy.net.

Green Power

In March 2000, electric generation suppliers began offering New Jersey consumers "green power" or Green-e certified products. Green power is power produced by renewable or environmentally friendly energy sources, as distinct from power produced by fossil fuel, nuclear, and other types of generators.

Green-e products meet a set of standards established by the Environmental Protection Agency. One standard requires that at least 50% of the electricity supply for the product comes from renewable electricity resources such as wind. Both Conectiv Energy and Green-mountain.com currently offer Green-e certified products. A portion of GreenMountain.com's product is supplied by the Green Mountain Wind Farm in Garrett, Pennsylvania.

Societal Benefit Charges (SBC)

The Energy Efficiency and Renewable Energy Fund (EE/REF), part of the Electric Discount and Energy Competition Act signed into law by Governor Whitman on February 9, 1999, will be one of the nation's premier state funding programs for renewable energy technologies. The fund is scheduled to begin operation by the end of 2000, providing cost share and production incentives for renewable energy projects. The specifics of this 8-year program will be decided by the New Jersey Board of Public Utilities. Contact Cameron Johnson, listed under Key Contacts, for more information.

Renewable Portfolio Standard (RPS)

The Electric Discount and Energy Competition Act requires all electricity suppliers selling into the retail market to have a renewable portfolio standard or RPS. An RPS requires power suppliers to purchase a percentage of their energy



Green Mountain Power Corporation/PIX05591

"The combination of the Societal Benefit Funds and the Net Metering legislation makes wind energy development a practical electric power alternative for farmers and other rural land-owners in New Jersey."

David Wooley, American Wind Energy Association



New Jersey

Additional Resources

U.S. Department of Energy
Philadelphia Regional Office
1880 JFK Boulevard, Suite 501
Philadelphia, PA 19103
215-656-6978
<http://www.eren.doe.gov/pro/>

U.S. Department of Energy
Wind Energy Program
Forrestal Building
1000 Independence Ave., S.W.
Washington, D.C. 20585
202-586-5348
www.eren.doe.gov/wind

National Renewable Energy
Laboratory
National Wind Technology Center
1617 Cole Boulevard
Golden, Colorado 80401
303-384-6979
www.nrel.gov/wind

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needs from renewable resources. The percentage would be determined by the state based on its resource diversity, environmental protection, economic development goals, and other factors. Beginning in 2001, New Jersey's RPS must include 1/2% from Class 1 renewables (e.g. wind power). This increases to 1% by 2006 and then will increase another 1/2% annually up to 4% by 2012.

Low Interest Loans

The New Jersey Office of Sustainable Business (NJOSB) offers low interest loan funds to sustainable businesses. Contact www.state.nj.us/commerce/sustain.htm or Cassandra Kling listed under Key Contacts for more information.

Net Metering

The concept of net metering programs is to allow the electric meters of customers with generating facilities to turn backwards when their generators are producing more energy than the customers' demand. Net metering allows customers to use their generation to offset their consumption over the entire billing period, not just instantaneously. This offset would enable customers with generating facilities to receive retail prices for the electricity they generate.

In January 1999, the New Jersey legislature enacted restructuring legislation (Bill #A16) requiring all utilities in the state to offer net metering to residential and small commercial customers generating electricity with wind systems up to 100 kilowatts. The law requires any net excess generation to be credited to the following month and any unused credit at the end of the year to be purchased by the utility at its avoided cost.

State Summary

In-State Wind Energy Potential:
1323 MW capacity after land-use and
environmental exclusions
2.5 billion kWh per year electric
energy

Key Contacts

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Links

Database of State Incentives for
Renewable Energy
www.solar.mck.ncsu.edu/dsire.htm

Green-e Renewable Energy Program
www.green-e.org

GreenPower Network
U.S. Department of Energy
www.eren.doe.gov/greenpower

National Wind Coordinating Committee
www.nationalwind.org

New Jersey Board of Public Utilities
www.bpu.state.nj.us

Utility Wind Interest Group, Inc.
www.uwig.org

Wind Energy Fact Sheets
American Wind Energy Association
www.awea.org/pubs/factsheets.html

Wind Energy Projects
American Wind Energy Association
www.awea.org/projects/index.htm

Wind Powering America
U.S. Department of Energy
www.eren.doe.gov/windpoweringamerica